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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/671,846

09/25/2003

Eugene George Olczak

133074-1

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07/09/2008

SABIC - 08CS - STRUCTURED PRODUCTS

SABIC Innovative Plastics - IP Legal

ONE PLASTICS AVENUE

PITTSFIELD, MA 01201-3697

EXAMINER

CHEVALIER, ALICIA ANN

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

07/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/671,846	Applicant(s) OLCZAK ET AL.	
	Examiner ALICIA CHEVALIER	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-13, 29-33 and 35-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-13, 29-33 and 35-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

RESPONSE TO AMENDMENT

1. Claims 2-13, 29-33 and 35-38 are pending in the application, claims 1, 14-28 and 34 have been cancelled.

REJECTIONS

2. **The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.**

Claim Rejections - 35 USC § 103

3. Claims 2-13, 29-33 and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGrath (U.S. Patent No. 4,025,159) in view of Nilsen et al. (U.S. Patent No. 5,657,162).

McGrath discloses a multiplayer optical film (*cellular retroreflective sheeting, title*). The film comprises at least two component films (*bass sheet and cover film, col. 3, lines 25-26*). At least one of the component films (*bass sheet*) has an upper and lower surface (*figure 3*). The upper surface comprises a series of optical structures (*microspheres, col. 3, line 33*) and a plurality of raised spacing structures (*narrow intersecting bonds, col. 3, line 26*). The lower surface is essentially planar (*figure 3*). The component films are joined so as to constitute a single structure comprising at least one gap disposed between the component films (*figure 3*).

Furthermore, the gap is deemed to be greater than the coherent length of light used to illuminate the optical film since the reference discloses that same height for the spacing structures as claimed by Applicant. See the discussion below regarding claim 7. Furthermore,

Applicant's specification on page 7, paragraph [0020] recites that the gap between surfaces should be greater than the coherent length of the light source, typically no less than a few microns.

McGrath fails to disclose that there is a second component film.

Nilsen discloses a retroreflective article with multiple prism locations (*title*). Figure 5 shows that multiple layers of retroreflective sheeting can be stacked to create different design patterns (*col. 5, lines 13-60*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to stack multiple layers of McGrath as taught by Nilsen in order to create different design patterns.

When layers of McGrath are stacked they will create the claim first and second component film structural arrangement.

The preamble/limitation "backlighting display" is deemed to be a statement with regard to the intended use and is not further limiting in so far as the structure of the product is concerned. In article claims, a claimed intended use must result in a ***structural difference*** between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. MPEP § 2111.02.

McGrath discloses that the optical structures are convex and concave structures (*microspheres, col. 3, line 33 and figure 3*). McGrath discloses that the optical structures are prisms, since the reference discloses cube-corner elements can be interchangeable used with the microspheres (*col. 6, lines 13-20 and figure 7*). McGrath discloses that the raised spacing

Art Unit: 1794

structures comprise at least one post-structure and/or at least one beam structure (*narrow intersection bonds, col. 3, line 26 and figures 1, 3 and 7*). McGrath discloses that the spacing structures have a height relative to the optical structures between about 0.1 and about 20 microns, since the reference shows in figure 3 that the spacing structure, i.e. narrow intersection bonds, have a height of half the diameter of the optical structures, i.e. microspheres, and the diameter of the microspheres is between 10 and 200 micrometers (*col. 5, lines 29-30*), which means that the height of the narrow intersection bonds is between 5 to 100 microns. McGrath discloses that the raised spacing structures comprise at least one post-structure (*narrow intersection bonds, col. 3, line 26 and figures 1, 3 and 7*). McGrath discloses that the component films have a thickness between about 0.006 and about 5 millimeters, since the reference discloses that the base sheet has a thickness of 75 micrometers (*col. 6, lines 60-61*) and the cover film has a thickness between 1 and 5 mils (*col. 5, line 14*), which together have a thickness of 100.4-203 micrometers or 0.1 to 0.2 mm. McGrath discloses that the gap comprises solid matter, fluid matter and combinations thereof, since the reference discloses that air, i.e. a fluid, in the gaps (*col. 3, lines 23-30*). McGrath discloses that the raised spacing structures have either equal or unequal heights relative to the optical structures (*figures 3 and 7*). Figure 3 in McGrath shows that the raised spacing structures occupy an area, the area is deemed to define a percentage of a total area of the film surface upon which the raised spacing structures are disposed.

Furthermore, it can be seen from figure 1 that the percentage is in the range between about 1 and about 50.

ANSWERS TO APPLICANT'S ARGUMENTS

4. Applicant's arguments in the response filed March 31, 2008 regarding the 35 U.S.C. 103(a) rejection over McGrath in view of Nilsen of record have been carefully considered but are deemed unpersuasive.

Applicant argues that McGrath does not disclose the combination of a first and second backlighting component films. The examiner has already conceded this point in the rejection.

Applicant argues even if the cellular reflecting sheets of McGrath were stacked, such stacked sheets of McGrath would not have all the features of claim 33. Applicant specifically points out that, such stacked sheeting would not have any raised spacing structures from the upper surface of the lower sheeting contacting any essentially lower surface of the upper sheeting so as to provide a gap between microspheres of the lower sheeting and the lower surface of the upper sheeting.

As seen in figure 3 of McGrath there is raised spacing structure, reference #13, and gaps between the microspheres, reference #16, in the areas not occupied by spacing structure, reference #13. Therefore, the combination of McGrath and Nilsen render claim 33 obvious.

Applicant argues that claim 36 is patent able over McGrath and Nilsen for reasons analogous to claim 33. Applicant's arguments regarding claim 33 have already been addressed above.

Applicant argues that McGrath fails to disclose "a backlight illumination source providing illumination to the multilayer backlighting display optical film." Applicant further adds that McGrath does not disclose any illumination source as part of the optical device.

Claim 35 does not require the illumination source to be anything more than a light source. The claim does not further limit the source to any type of layer. Therefore, since sunlight is a illumination source capable of back lighting McGrath article, McGrath anticipates the limitation.

Applicant argues that McGrath does not disclose “said component films being configured such that the optical structures of the component films are configured orthogonally.”

As seen in figure 1 of McGrath the spacing structures, reference # 13, are configured in a grid with lines running horizontally and vertically. Figure 1 also shows the optical structures are configured in the same manner. Therefore, since the optical structures are configured in a grid structure, when two layers are stacked on top of each other they will always be orthogonal to each other.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 1794

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (571) 272-1490. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Alicia Chevalier/
Primary Examiner, Art Unit 1794
7/12/2008